

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property
 Organization
 International Bureau



(43) International Publication Date
 3 June 2004 (03.06.2004)

PCT

(10) International Publication Number
WO 2004/046271 A1

(51) International Patent Classification⁷: **C09K 3/00, 5/00**

(21) International Application Number:
 PCT/US2003/036558

(22) International Filing Date:
 14 November 2003 (14.11.2003)

(25) Filing Language: English

(26) Publication Language: English

(30) Priority Data:
 60/427,133 18 November 2002 (18.11.2002) US

(71) Applicants (*for all designated States except US*): **SAUDI ARABIAN OIL COMPANY [SA/SA]**; R-3296, Administration Building, Dhahran 31311 (SA). **ARAMCO SERVICES COMPANY [US/US]**; 9009 West Loop South, Houston, TX 77096 (US).

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **JARALL, Abdulghani [NZ/SA]**; Abqaiq Aramco Camp, N-Block 203L, Abqaiq 31311 (SA).

(74) Agent: **CINAMON, Jay, S.**; 150 East 42nd Street, New York, NY 10017-5612 (US).

(81) Designated States (*national*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(84) Designated States (*regional*): ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

- with international search report
- before the expiration of the time limit for amending the claims and to be republished in the event of receipt of amendments

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

(54) Title: **DESCALING AND CORROSION INHIBITING COMPOSITION**

(57) **Abstract:** The present invention is directed to a composition, and a process employing same, for descaling, cleaning and inhibiting the corrosion of process equipment made of steel by including an inhibitory effective amount of acridine orange in the composition.



WO 2004/046271 A1